

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 May 2005 (06.05.2005)

PCT

(10) International Publication Number
WO 2005/040554 A1

(51) International Patent Classification⁷: **E21B 43/26**

JONES, Timothy, Gareth, John [GB/GB]; 16 Denmark Road, Cottenham, Cambridgeshire CB4 8QS (GB).

(21) International Application Number:
PCT/GB2004/004280

(74) Agent: **MIRZA, Akram, Karim**; Intellectual Property Law Department, Schlumberger Cambridge Research Limited, High Cross, Madingley Road, Cambridge CB3 0EL (GB).

(22) International Filing Date: 11 October 2004 (11.10.2004)

(25) Filing Language: English

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(26) Publication Language: English

(30) Priority Data:
0323916.7 11 October 2003 (11.10.2003) GB

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(71) Applicants (*for all designated States except US*): **SCHLUMBERGER TECHNOLOGY B.V.** [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL). **SCLUMBERGER CANADA LIMITED** [CA/CA]; 525 - 3rd Avenue S.W., Calgary, Alberta T2P 0G4 (CA). **SCHLUMBERGER HOLDINGS LIMITED**; P.O. Box 71, Craigmuir Chambers, Road Twon, Tortola (VG). **SERVICES PETROLIERS SCHLUMBERGER** [FR/FR]; 42, rue Saint-Dominique, F-75007 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **HARTSHORNE, Robert, Seth** [GB/GB]; 44 Mill Hill, Newmarket, Suffolk CB8 0JB (GB). **HUGHES, Trevor, Lloyd** [GB/GB]; 5 St. Margaret's Square, Cambridge CB1 8AP (GB). **TUSTIN, Gary, John** [GB/GB]; 1a Babraham Road, Sawston, Cambridgeshire CB2 4DQ (GB). **ZHOU, Jian** [CN/US]; 16614 Colony Terrace Drive, Sugar Land, TX 77479 (US).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **VISCOELASTIC SURFACTANT GELS WITH REDUCED SALFT CONCENTRATION**

(57) Abstract: A well bore treatment fluid of viscoelastic surfactants and methods for increasing the viscosity of the fluid at high temperature without increasing its salt concentration by adding a organic hydrophilic-lipophilic compound and reducing the salt concentration below 6 per cent.

Best Available Copy

WO 2005/040554 A1